

IN THE CLAIMS:

Please **CANCEL** claims 19-21 without prejudice or disclaimer.

Please **AMEND** claims 1, 4, 9, 11-15, and 18 as follows.

1. (Currently Amended) A method, comprising:

assembling data units of at least one incoming data stream into an output data stream, wherein the data units are destined for at least one destination node, and the output stream comprises a service level requirement for each of the at least one destination node;

selecting, in response to the assembling, a first set of physical radio transmission resources for the output data stream, wherein the first set of physical radio transmission resources is selected from physical radio transmission resources of one of a plurality of wireless connectivity technologies and belongs to physical radio transmission resources available in a wireless communication device, wherein the wireless communication device is provided with the plurality of wireless connectivity technologies;

searching for a path that leads from the wireless communication device to one of the at least one destination node and fulfills the service level requirement corresponding to that destination node when one leg of the path is implemented by the first set of physical radio transmission resources, wherein the searching is performed with respect to each of the at least one destination node;~~and~~

scheduling a transmission of the output data stream when the path is found for each of the at least one destination node, wherein the scheduling presumes that the transmission is to occur through the first set of physical radio transmission resources; and

controlling the plurality of connectivity technologies of the wireless communication device so that a connectivity technology corresponding to the first set of physical radio transmission resources is in an active state when the transmission is scheduled to occur and the wireless communication device is with respect to its other wireless connectivity technologies in a state where the service level requirement of each destination node is maintained during the transmission.

2. (Previously Presented) A method according to claim 1, further comprising:

determining a path comprising a highest service level of all paths leading to a destination node, wherein the determining is performed for a destination node to which no path fulfilling the corresponding service level requirement is found.

3. (Previously Presented) A method according to claim 2, further comprising:

configuring the first set of physical radio transmission resources;

testing whether the determined path comprising the highest service level fulfills the service level requirement for the at least one destination node in response to the configuring; and

scheduling a transmission of the output data stream when the determined path fulfills the service level requirement for the at least one destination node, wherein the scheduling presumes that the transmission is to occur through the first set of physical radio transmission resources,

wherein the configuring is performed when no path fulfilling the respective service level requirement is found for the at least one destination node in the searching.

4. (Currently Amended) A method, comprising:~~according to claim 1, further comprising:~~

assembling data units of at least one incoming data stream into an output data stream, wherein the data units are destined for at least one destination node, and the output stream comprises a service level requirement for each of the at least one destination node;

selecting, in response to the assembling, a first set of physical radio transmission resources for the output data stream, wherein the first set of physical radio transmission resources is selected from physical radio transmission resources of one of a plurality of wireless connectivity technologies and belongs to physical radio transmission resources available in a wireless communication device, wherein the wireless communication device is provided with the plurality of wireless connectivity technologies;

searching for a path that leads from the wireless communication device to one of the at least one destination node and fulfills the service level requirement corresponding to that destination node when one leg of the path is implemented by the first set of physical radio

transmission resources, wherein the searching is performed with respect to each of the at least one destination node;

scheduling a transmission of the output data stream when the path is found for each of the at least one destination node, wherein the scheduling presumes that the transmission is to occur through the first set of physical radio transmission resources;

choosing a second set of radio transmission resources for the output data stream;

re-searching, in response to the choosing, for a path that leads from the wireless communication device to one of the at least one destination node and fulfills the service level requirement corresponding to that destination node when one leg of the path is implemented by the second set of physical radio transmission resources, wherein the searching is performed with respect to each of the at least one destination node; and

scheduling a transmission of the output data stream when the path is found for each of the at least one destination node in the re-searching, wherein the scheduling presumes that the transmission is to occur through the second set of physical radio transmission resources.

5. (Previously Presented) A method according to claim 4, further comprising:
configuring the physical radio transmission resources available in the wireless communication device.

6. (Previously Presented) A method according to claim 4, further comprising:

rearranging the data units in the output data stream.

7. (Previously Presented) A method according to claim 1, wherein the searching comprises finding all paths leading from the wireless communication device to the at least one destination node.

8. (Previously Presented) A method according to claim 7, wherein the searching further comprises performing the finding in another network element.

9. (Currently Amended) A method according to claim 1–~~19~~, wherein the controlling comprises changing, prior to the transmission of the output data stream, the wireless connectivity technology that is in an active state.

10. (Previously Presented) A method according to claim 1, wherein the selecting comprises utilizing information about a current state of the physical radio transmission resources available in the wireless communication device.

11. (Currently Amended) A method according to claim 1–~~19~~, wherein the other wireless connectivity technologies comprise a plurality of operation states, and the controlling comprises synchronizing the plurality of operation states for maintaining the service level requirement of each destination node during the transmission.

12. (Currently Amended) A system, comprising:

traffic assembler configured to assemble data units for at least one incoming data stream into an output data stream, wherein the data units are destined for at least one destination node, and the output stream comprises a service level requirement for each of the at least one destination node;

resource selector, responsive to the traffic assembler, configured to select a first set of physical radio transmission resources for the output data stream, wherein the first set of physical radio transmission resources is selected from physical radio transmission resources of one of a plurality of wireless connectivity technologies and belongs to physical radio transmission resources currently available in a wireless communication device, the wireless communication device being provided with the plurality of wireless connectivity technologies;

router configured to search for a path that leads to one of the at least one destination node and fulfills the service level requirement corresponding to that destination node when one leg of the path is implemented by the first set of physical radio transmission resources, wherein the router is further configured to search for the path for each of the at least one destination node;~~and~~

traffic scheduler configured to schedule a transmission of the output data stream when the path is found for each of the at least one destination node, wherein the

transmission is scheduled to occur through the first set of physical radio transmission resources; and

a controller configured to control the plurality of wireless connectivity technologies of the wireless communication device so that a wireless connectivity technology corresponding to the first set of physical radio transmission resources is in an active state when the transmission is scheduled to occur and that the wireless communication device is with respect to its other wireless connectivity technologies in a state where the service level requirement of each destination node is maintained during the transmission.

13. (Currently Amended) A system according to claim 12,-20, wherein the traffic assembler, the resource selector, the traffic scheduler, and the controller reside in a single wireless communication device.

14. (Currently Amended) A system according to claim 12,-20, wherein the other wireless connectivity technologies comprise a plurality of operation states; and the controller is further for synchronizing the plurality of operation states to maintain the service level requirement of each destination node during the transmission.

15. (Currently Amended) An apparatus, comprising:
a traffic assembler configured to assemble data units of at least one incoming data stream into an output data stream, wherein the data units are destined for at least one

destination node, and the output data stream comprises a service level requirement for each of the at least one destination node;

a resource selector responsive to the traffic ~~assembly~~ assembler and configured to select a first set of physical radio transmission resources for the output data stream, wherein the first set of physical radio transmission resources is selected from physical radio transmission resources of one of a plurality of wireless connectivity technologies and belongs to physical radio transmission resources currently available in the apparatus;

a path detector configured to detect whether a path leading to a destination node and fulfilling the corresponding service level requirement is available for each of the at least one destination node, wherein one leg of the path is implemented by the first set of transmission resources and wherein the path detector is operably connected to a routing entity configured to search for paths leading from the apparatus to the at least one destination node;~~and~~

a traffic scheduler, responsive to the path detector configured to schedule a transmission of the output data stream, wherein the traffic scheduler is configured to schedule the transmission to occur through the first set of physical radio transmission resources; and

a controller configured to control the plurality of wireless connectivity technologies so that a wireless connectivity technology corresponding to the first set of physical radio transmission resources is in an active state when the transmission is scheduled to occur and that the apparatus is with respect to its other wireless connectivity technologies in a state

where the service level requirement of each destination node is maintained during the transmission.

16. (Previously Presented) An apparatus according to claim 15, wherein the path detector comprises an interface for the routing entity, wherein the routing entity resides outside the apparatus and the interface is configured to receive the information about paths leading from the apparatus to the at least one destination node.

17. (Previously Presented) An apparatus according to claim 15, wherein the apparatus comprises the routing entity, the routing entity being configured to search all paths leading from the apparatus to the destination node.

18. (Currently Amended) The apparatus according to claim 15-21, wherein the other wireless connectivity technologies comprise a plurality of operation states; and the controller is further configured to synchronize the plurality of operation states to maintain the service level requirement of each destination node during the transmission.

19-21. (Cancelled)